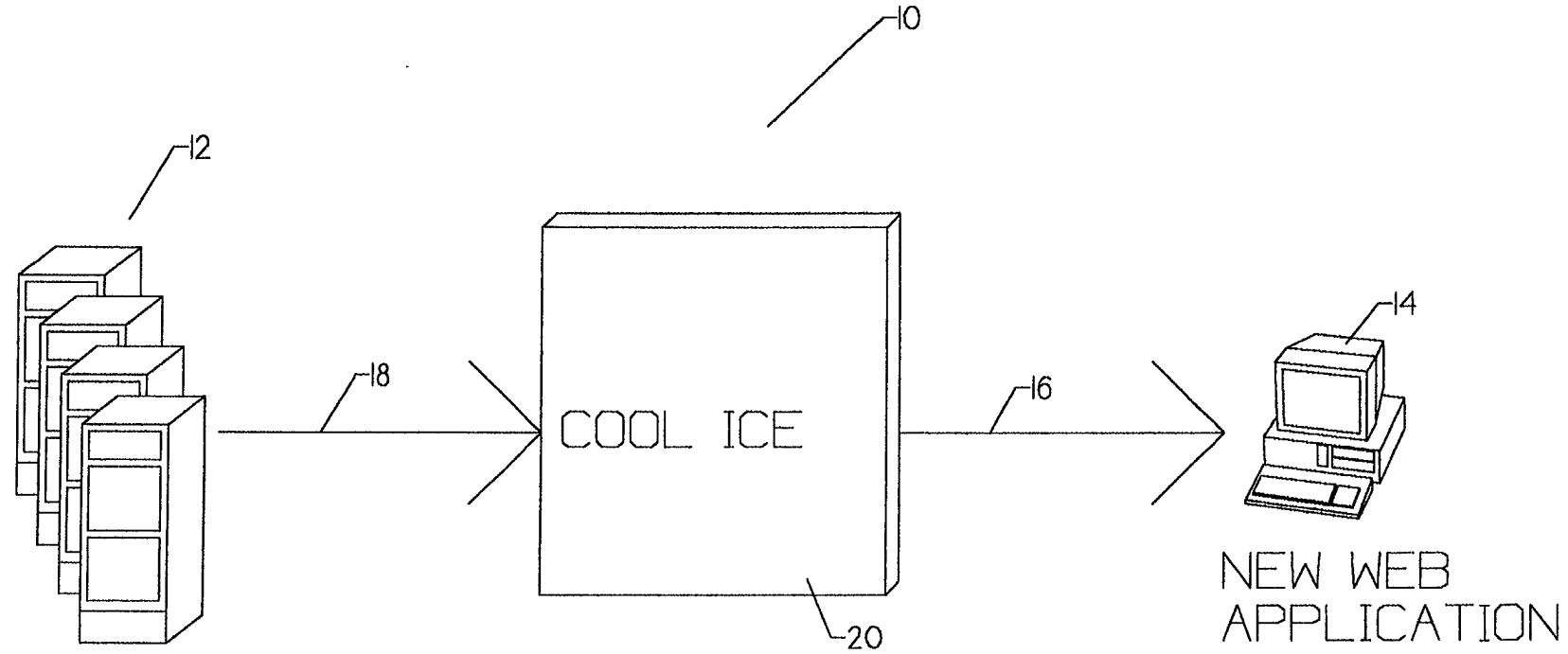

FIG. 1

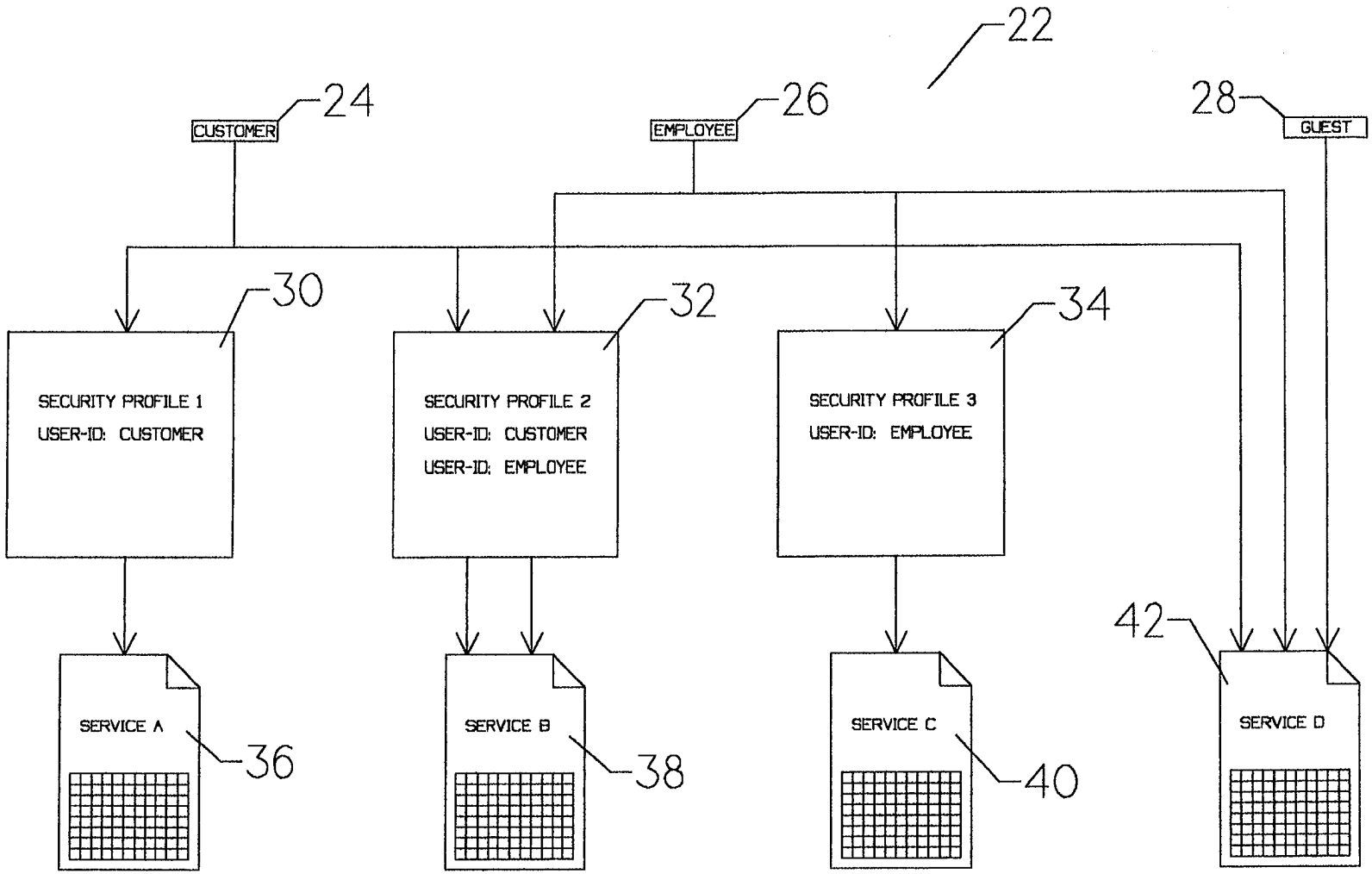

FIG. 2

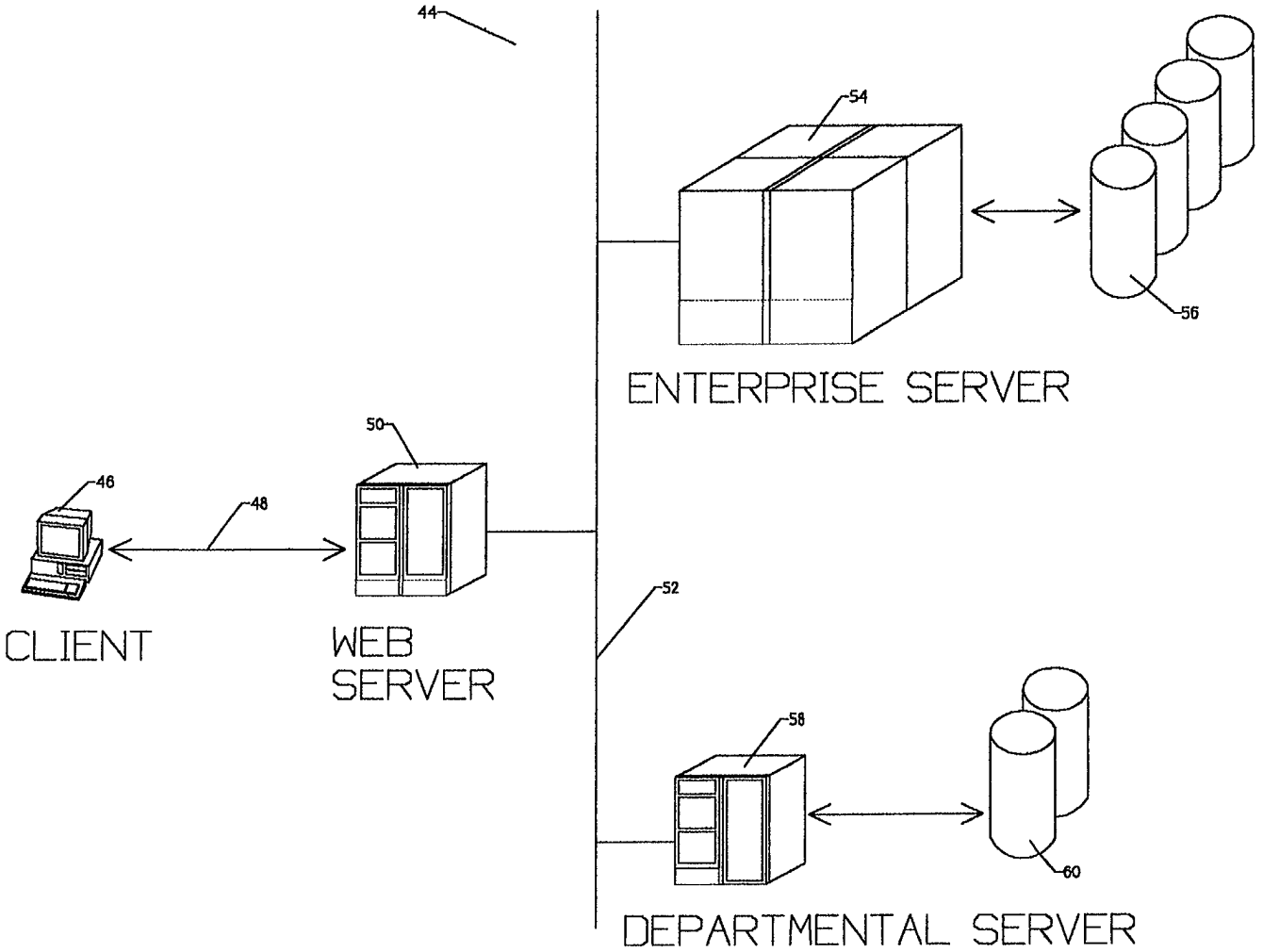
44
54
56
ENTERPRISE SERVER
50
46
48
CLIENT
WEB
SERVER
52
58
60
DEPARTMENTAL SERVER

FIG. 3

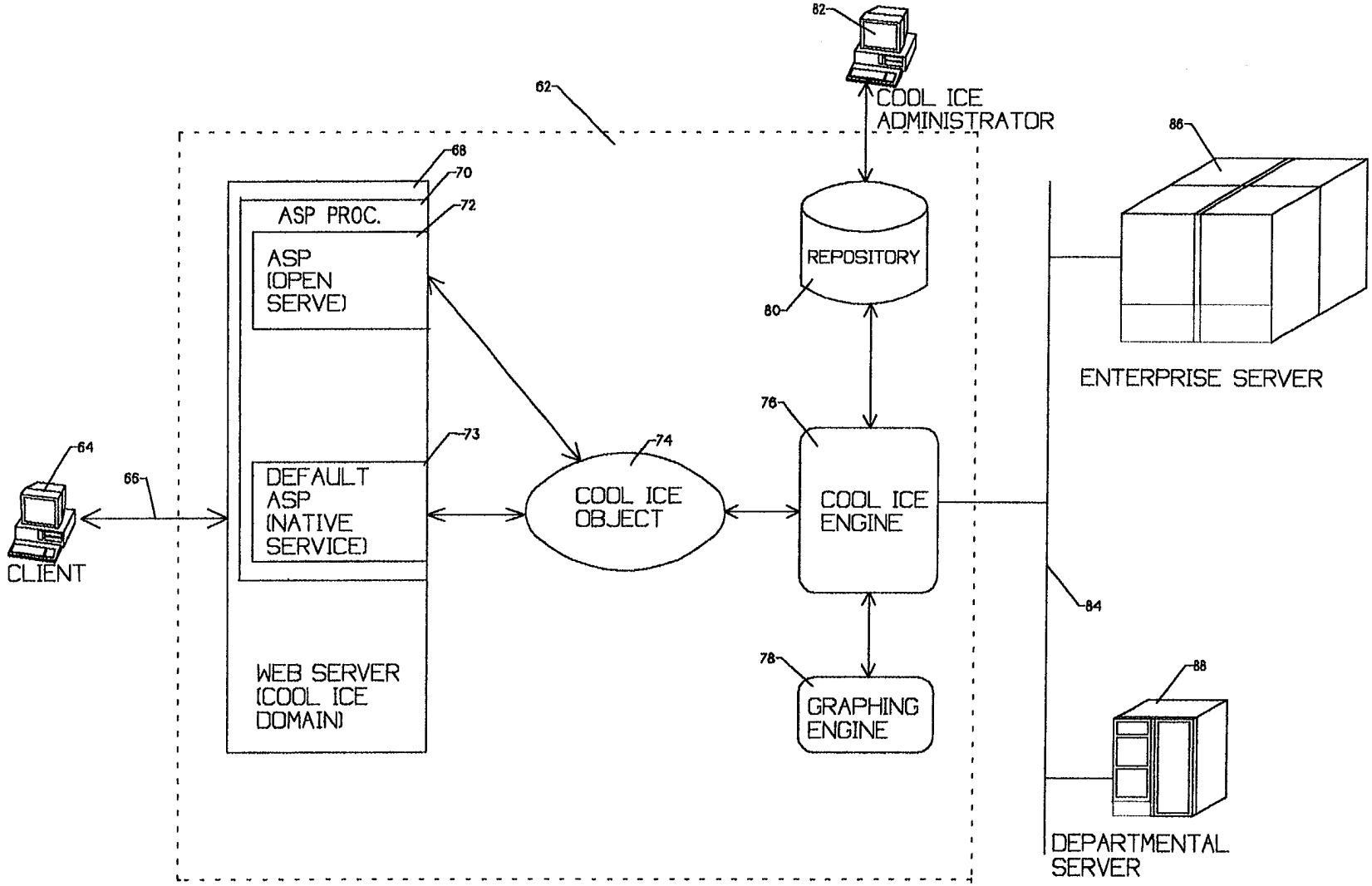

FIG. 4

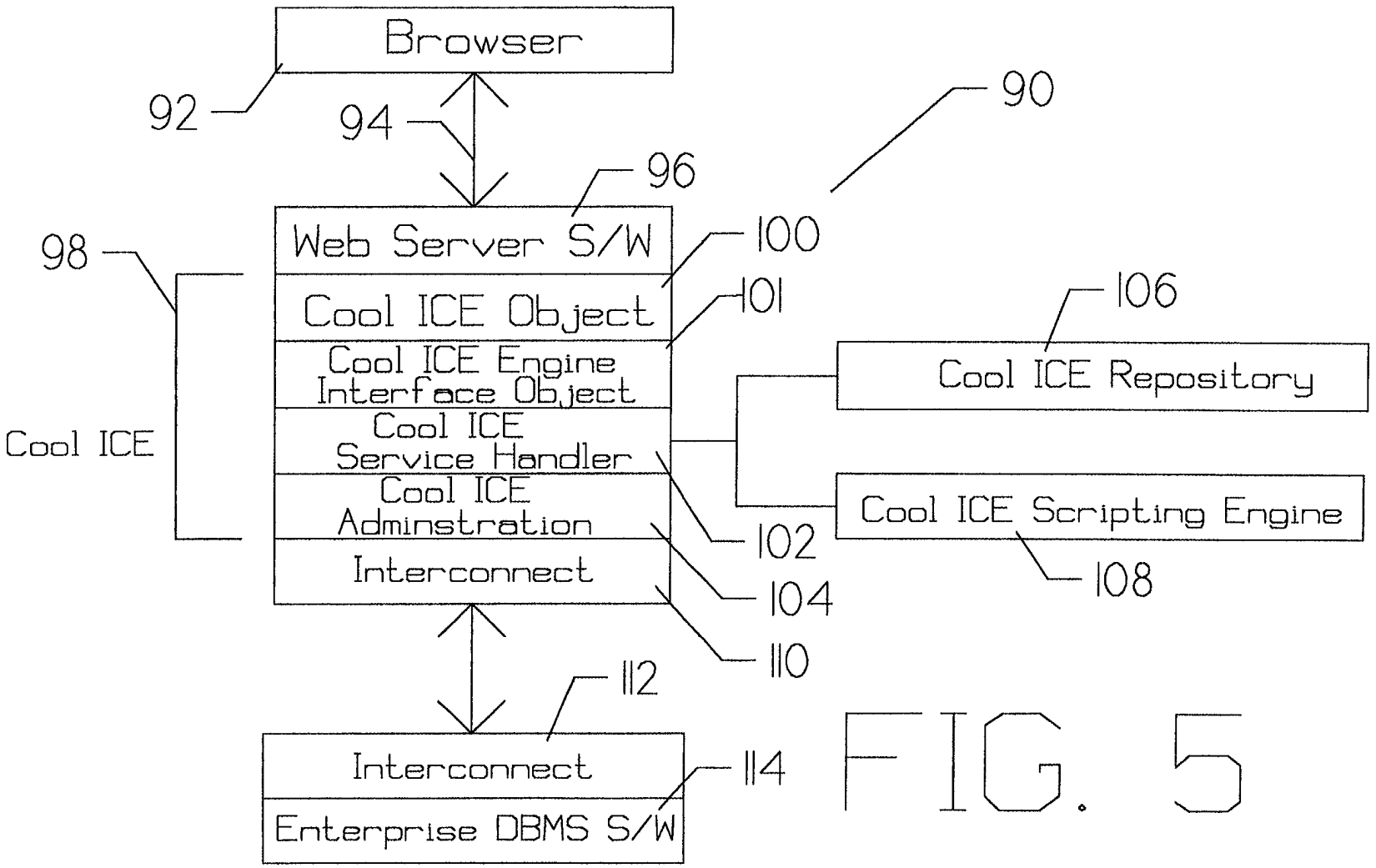
Browser
92
94
90
96
Web Server S/W
100
98
Cool ICE Object
101
106
Cool ICE Engine Interface Object
Cool ICE Repository
Cool ICE
Cool ICE Service Handler
Cool ICE Adminstration
Cool ICE Scripting Engine
102
Interconnect
104
108
110
112
Interconnect
114
Enterprise DBMS S/W

FIG. 5

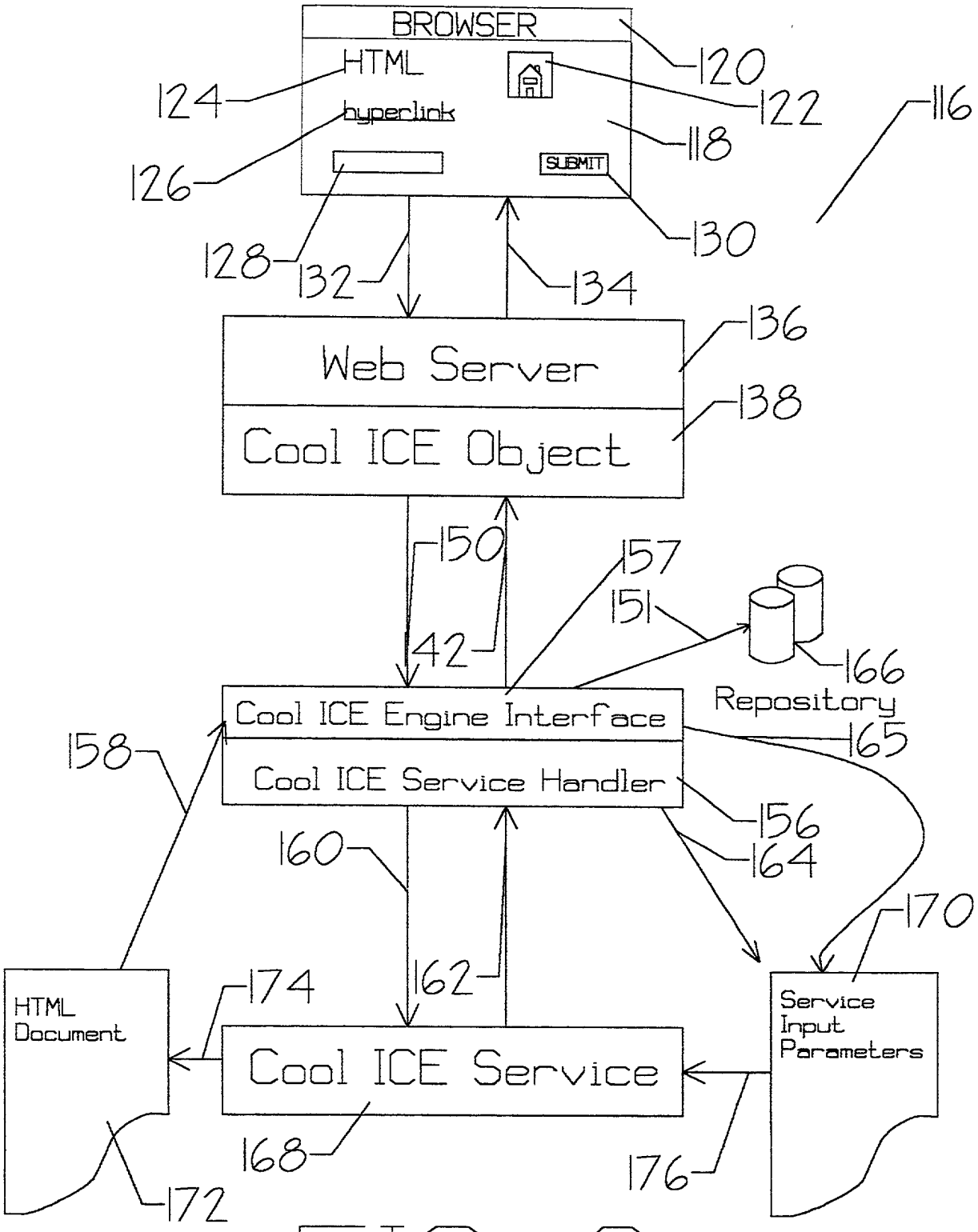
BROWSER
HTML
hyperlink
SUBMIT
120
122
124
126
116
118
128
130
132
134
Web Server
136
Cool ICE Object
138
150
157
151
42
166
Repository
Cool ICE Engine Interface
165
158
Cool ICE Service Handler
156
160
164
170
162
HTML
Document
174
Service
Input
Parameters
Cool ICE Service
168
176
172

FIG. 6

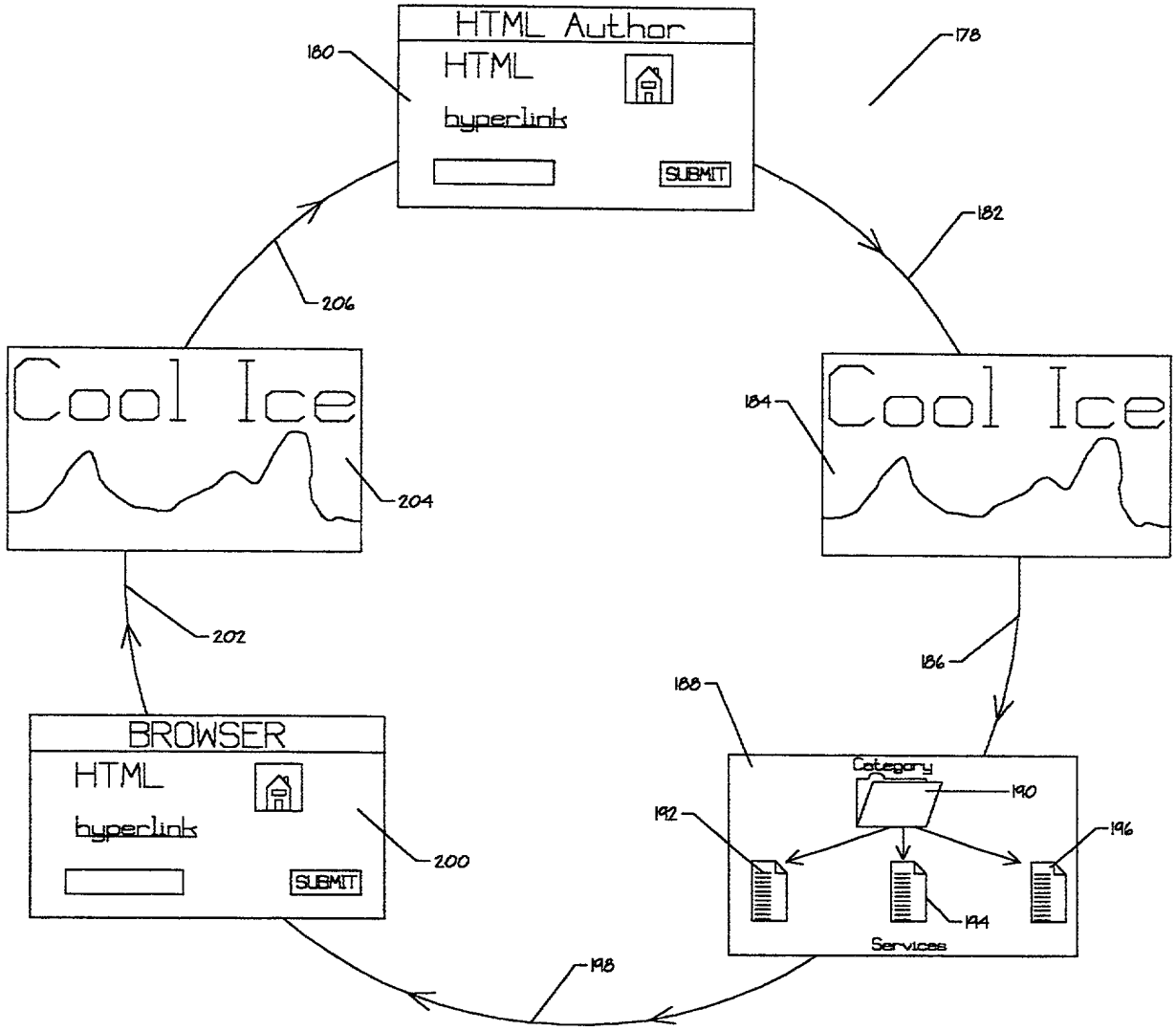
HTML Author
HTML
hyperlinks
SUBMIT
178
180
182
206
Cool Ice
204
184
Cool Ice
202
186
188
BROWSER
HTML
hyperlinks
SUBMIT
200
Category
190
192
196
194
Services
198

FIG. 7

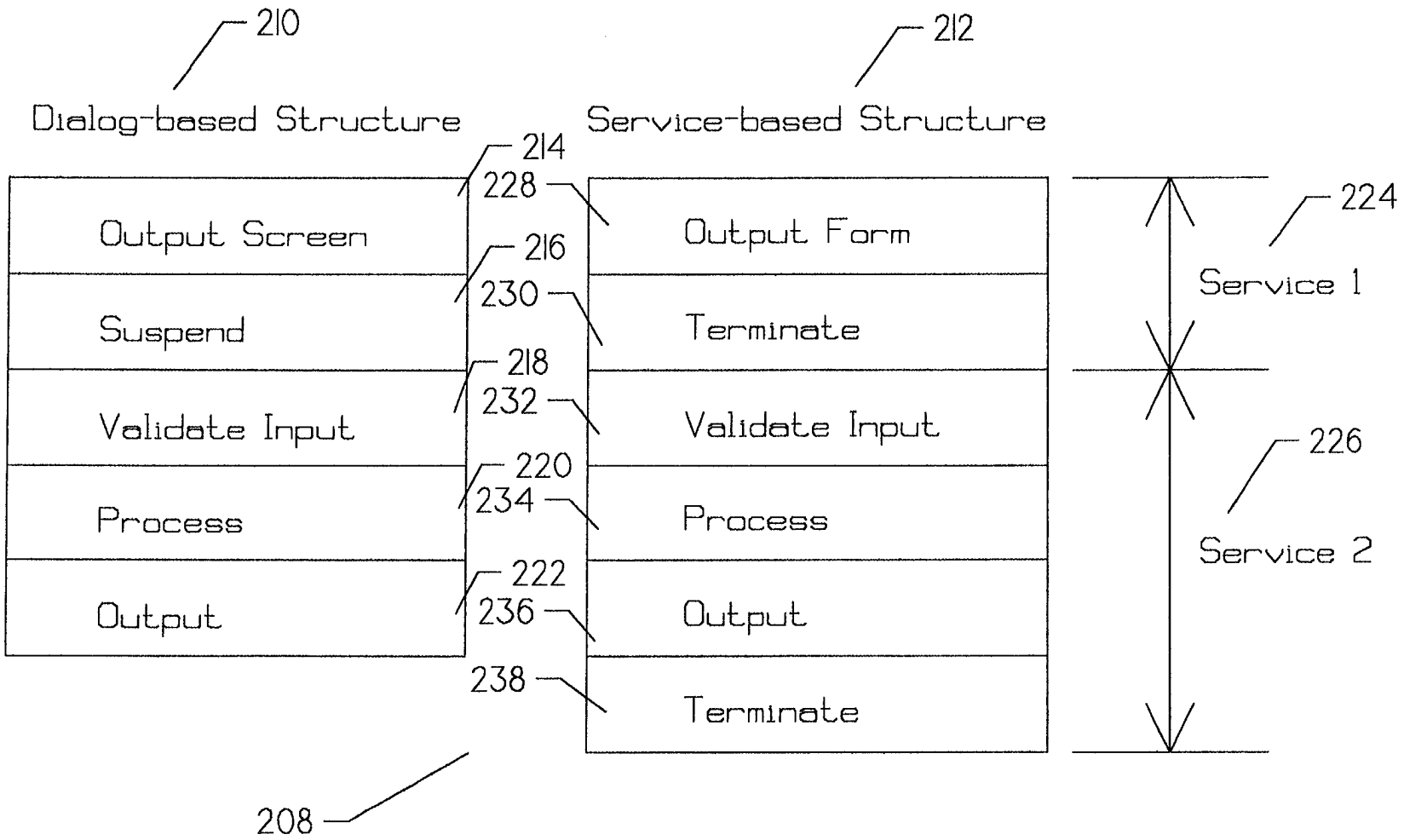
210
Dialog-based Structure
212
Service-based Structure
214
228
216
230
218
232
220
234
222
236
238
Output Screen
Suspend
Validate Input
Process
Output
Output Form
Terminate
Validate Input
Process
Output
Terminate
224
Service 1
226
Service 2
208

FIG. 8

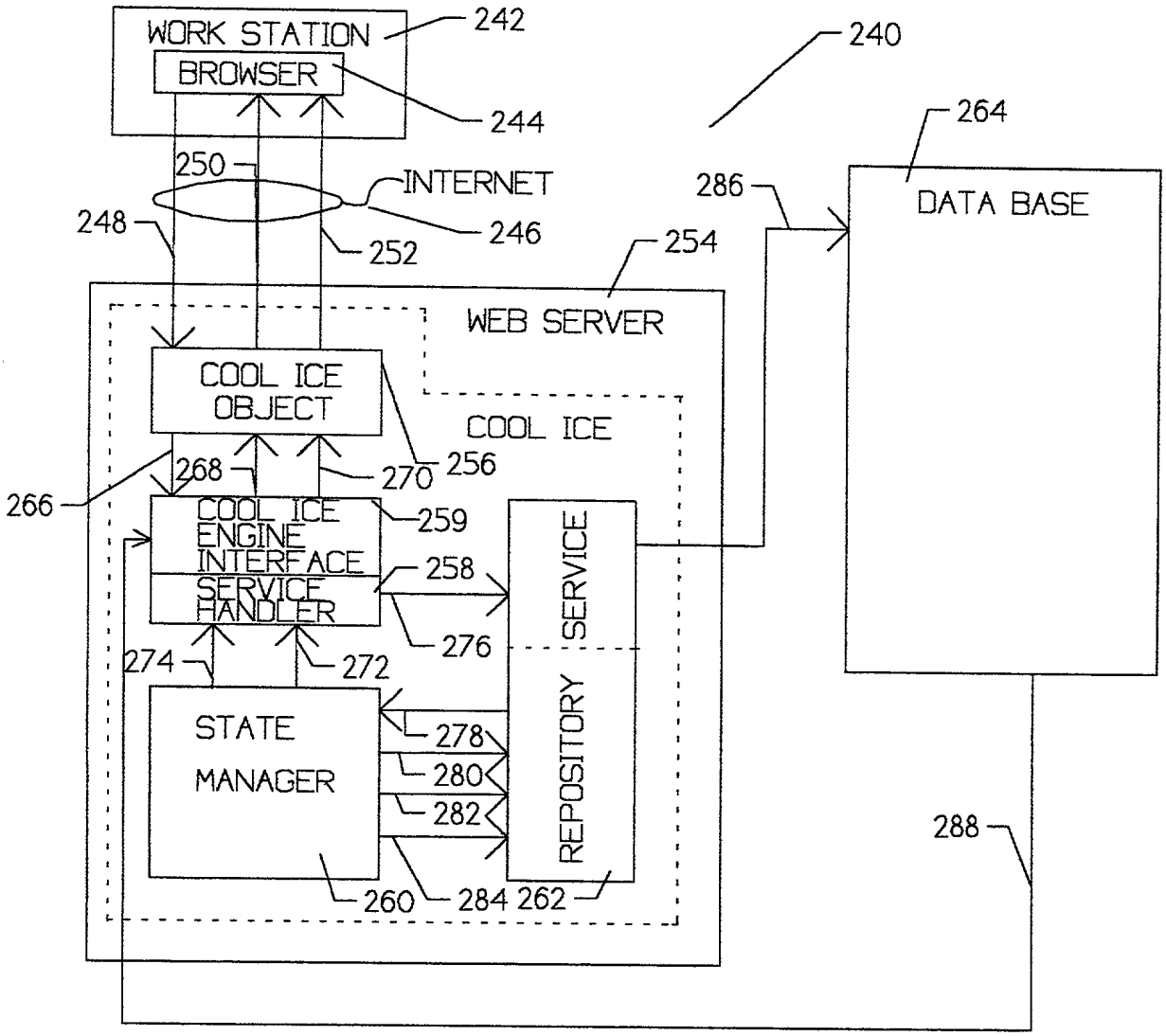
WORK STATION
242
BROWSER
244
240
264
250
INTERNET
286
DATA BASE
248
246
252
254
WEB SERVER
COOL ICE OBJECT
COOL ICE
256
268
270
266
COOL ICE ENGINE INTERFACE
259
SERVICE HANDLER
258
SERVICE
276
274
272
STATE MANAGER
278
280
282
REPOSITORY
288
260
284
262

FIG. 9

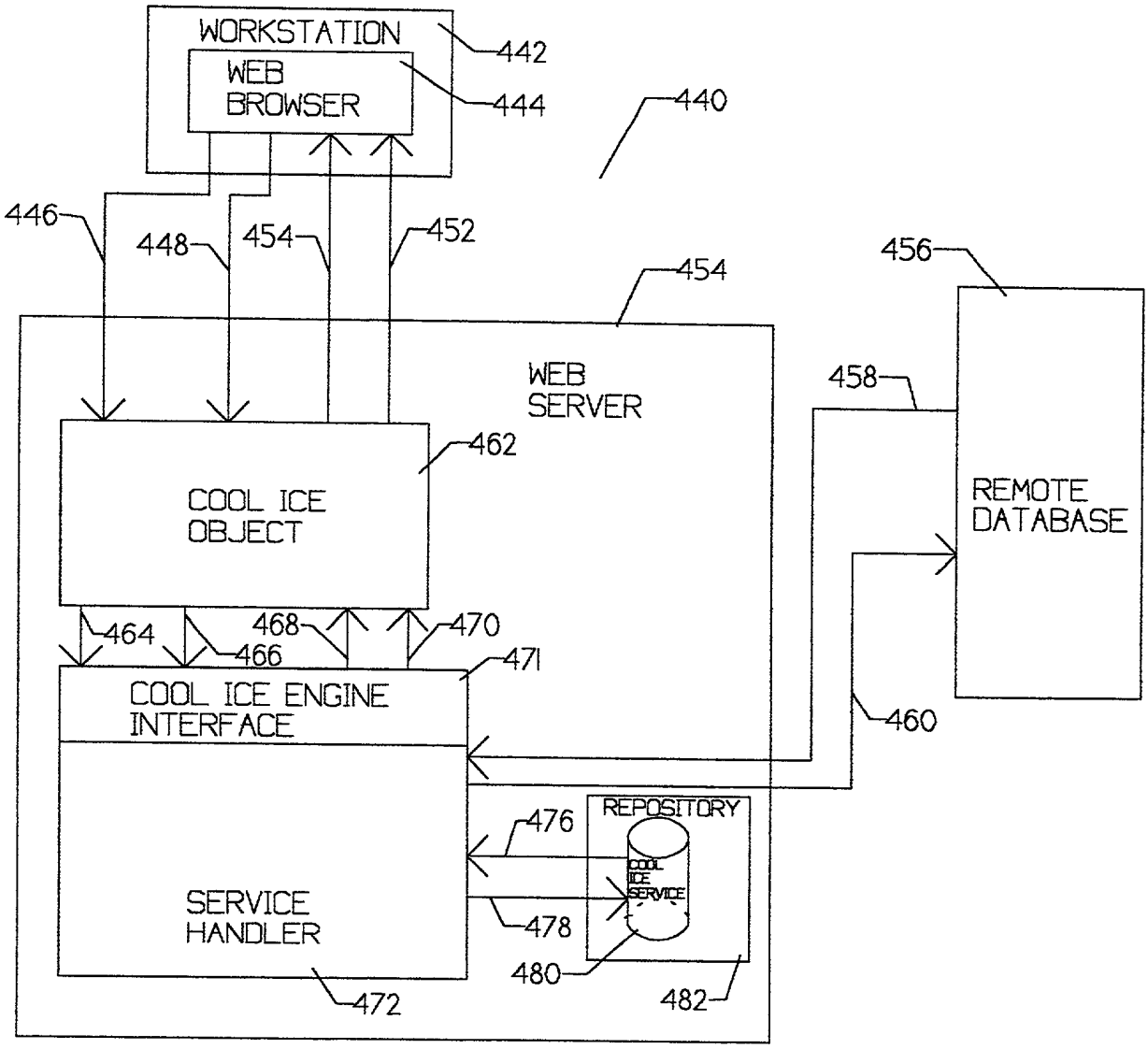
WORKSTATION
WEB BROWSER
442
444
440
446
448
454
452
454
456
WEB SERVER
458
462
COOL ICE OBJECT
REMOTE DATABASE
464
466
468
470
471
COOL ICE ENGINE INTERFACE
460
REPOSITORY
476
COOL ICE SERVICE
SERVICE HANDLER
478
480
482
472

FIG. 10

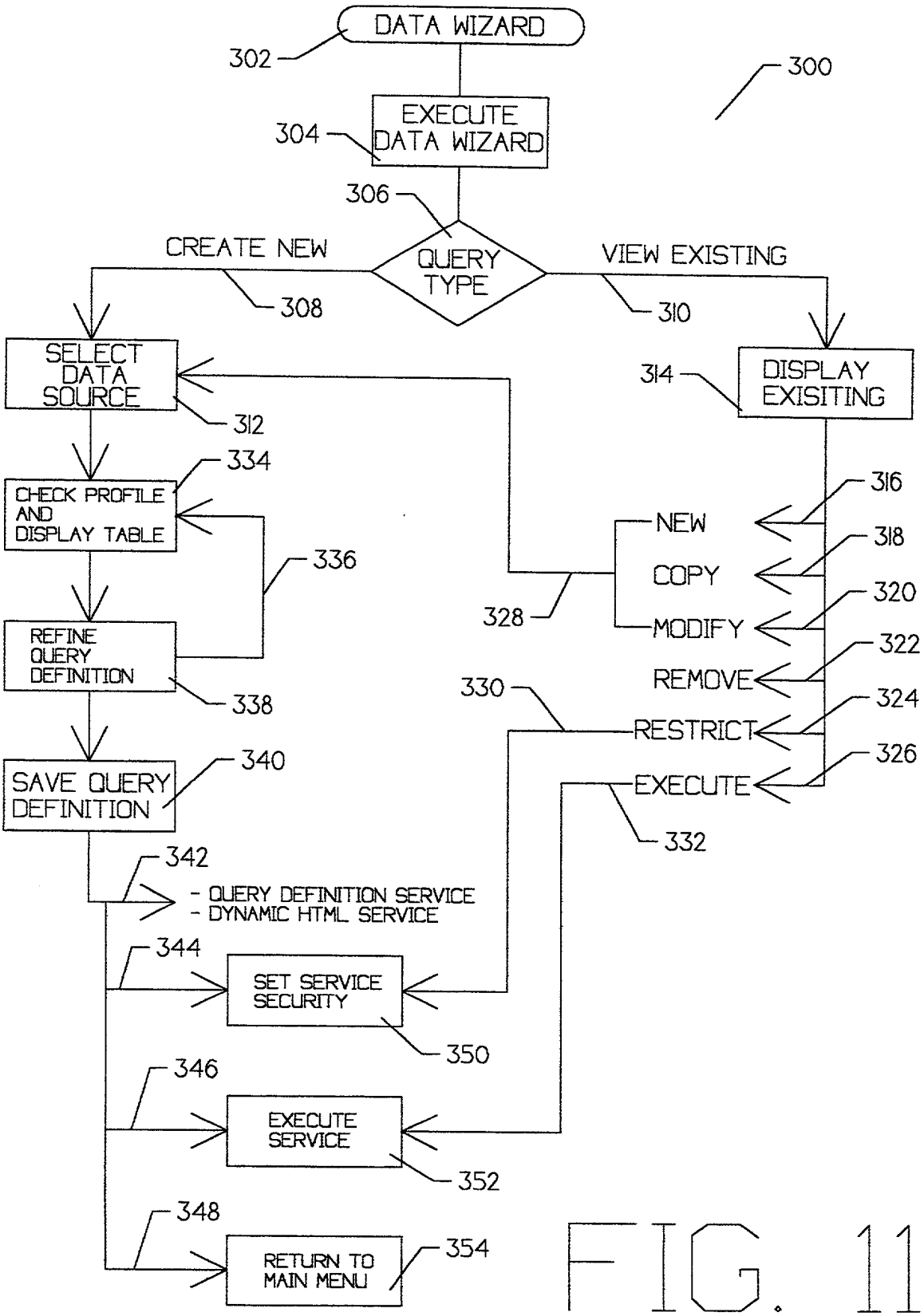
DATA WIZARD
302
300
EXECUTE DATA WIZARD
304
306
QUERY TYPE
CREATE NEW
308
VIEW EXISTING
310
SELECT DATA SOURCE
312
DISPLAY EXISITING
314
CHECK PROFILE AND DISPLAY TABLE
334
336
REFINE QUERY DEFINITION
338
SAVE QUERY DEFINITION
340
NEW
COPY
MODIFY
REMOVE
RESTRICT
EXECUTE
316
318
320
322
324
326
328
330
332
342
- QUERY DEFINITION SERVICE
- DYNAMIC HTML SERVICE
344
SET SERVICE SECURITY
350
346
EXECUTE SERVICE
352
348
RETURN TO MAIN MENU
354

FIG. 11

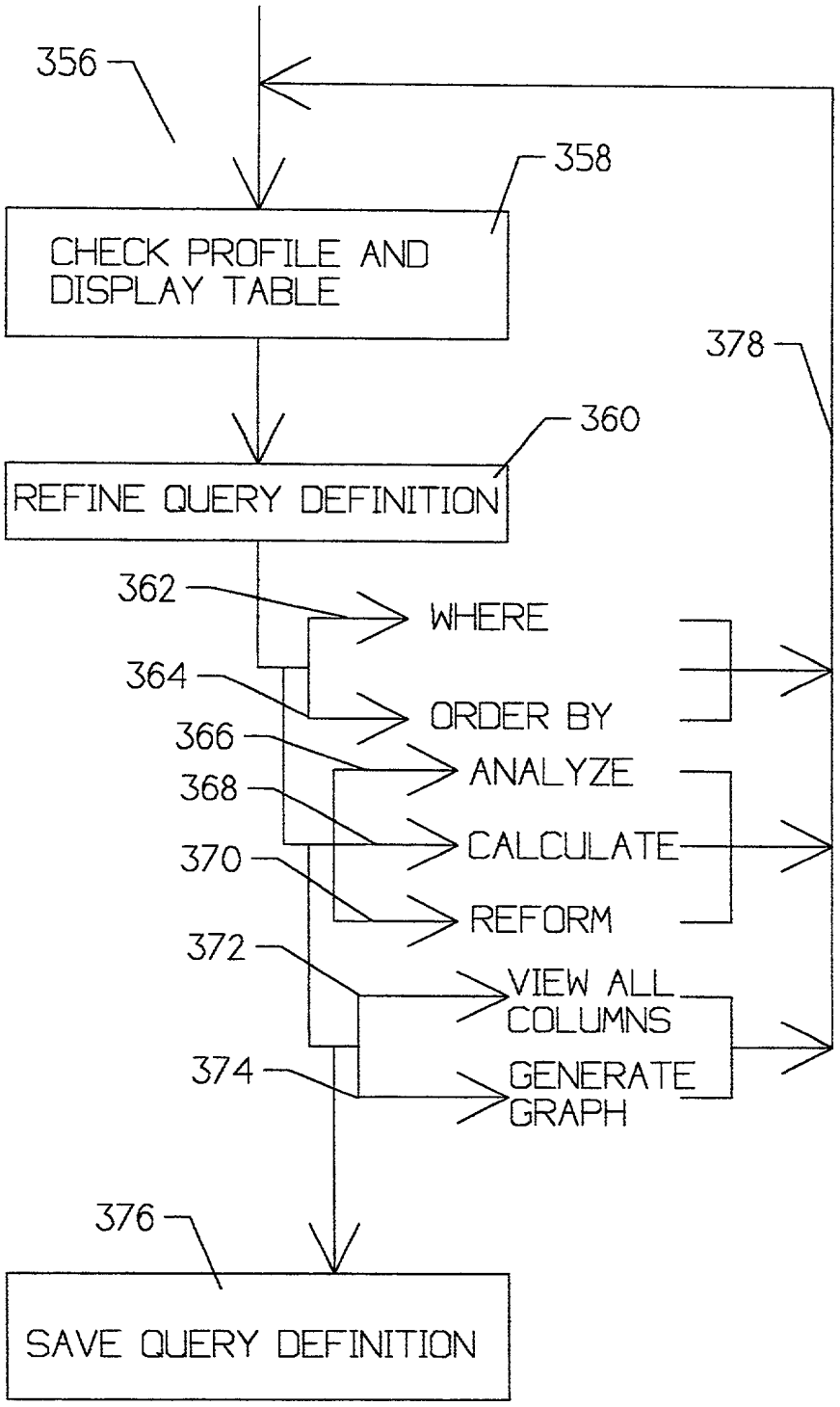
356
358
CHECK PROFILE AND DISPLAY TABLE
378
360
REFINE QUERY DEFINITION
362
WHERE
364
ORDER BY
366
ANALYZE
368
CALCULATE
370
REFORM
372
VIEW ALL COLUMNS
374
GENERATE GRAPH
376
SAVE QUERY DEFINITION

FIG. 12

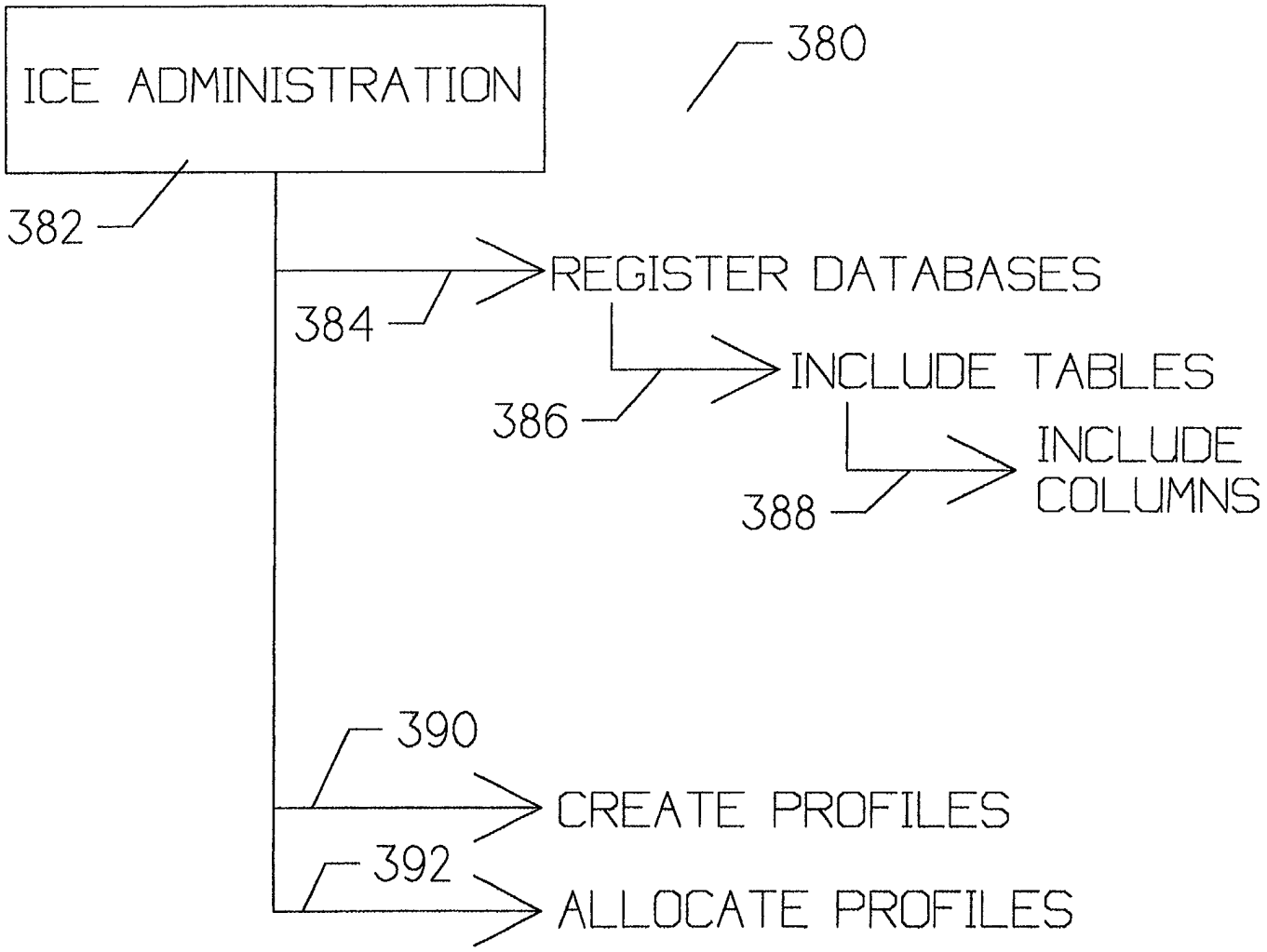

FIG. 13

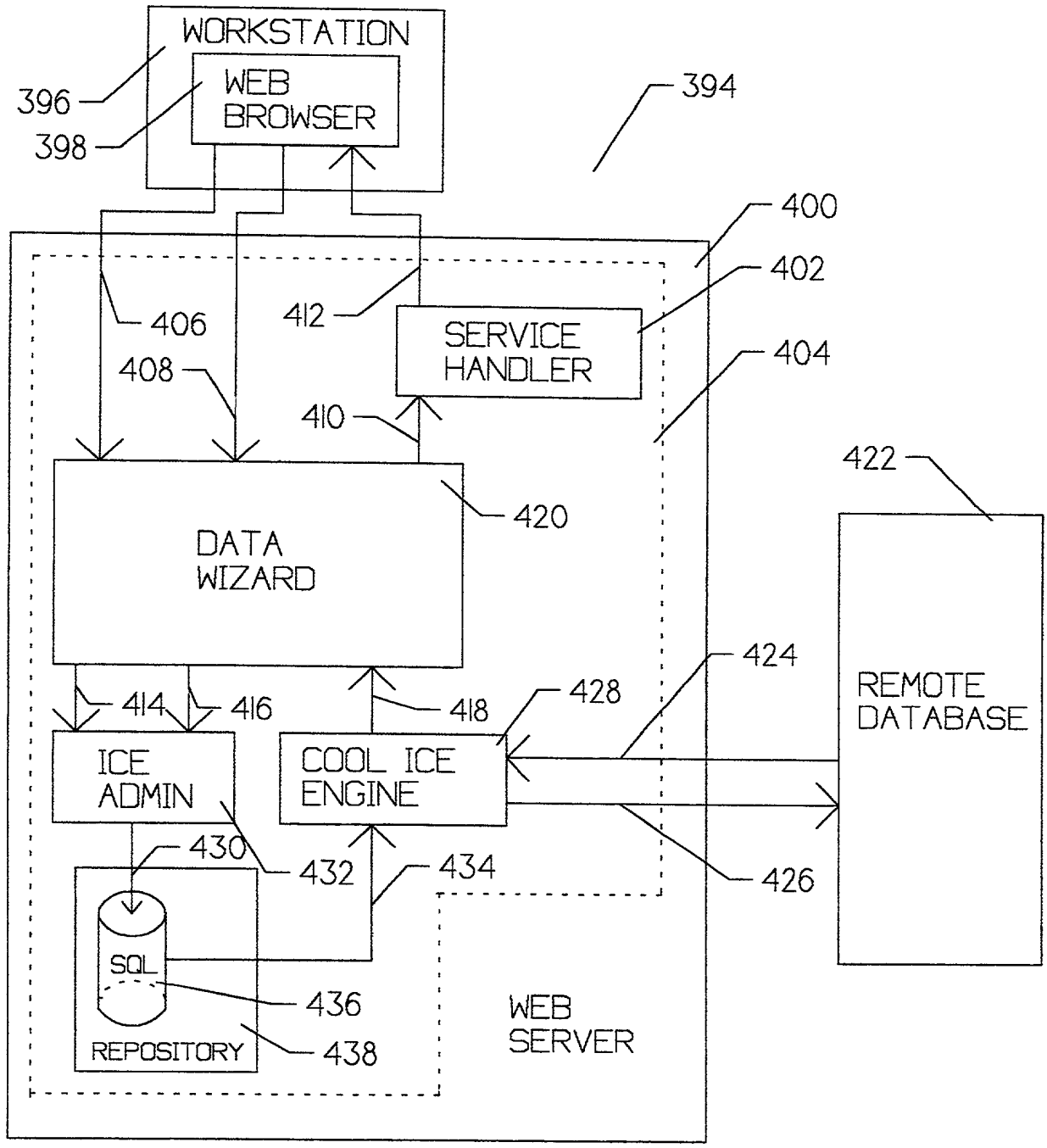
WORKSTATION
WEB BROWSER
396
398
394
400
402
406
412
SERVICE HANDLER
404
408
410
422
DATA WIZARD
420
REMOTE DATABASE
424
414
416
418
428
ICE ADMIN
COOL ICE ENGINE
430
432
434
426
SQL
436
WEB SERVER
REPOSITORY
438

FIG. 14

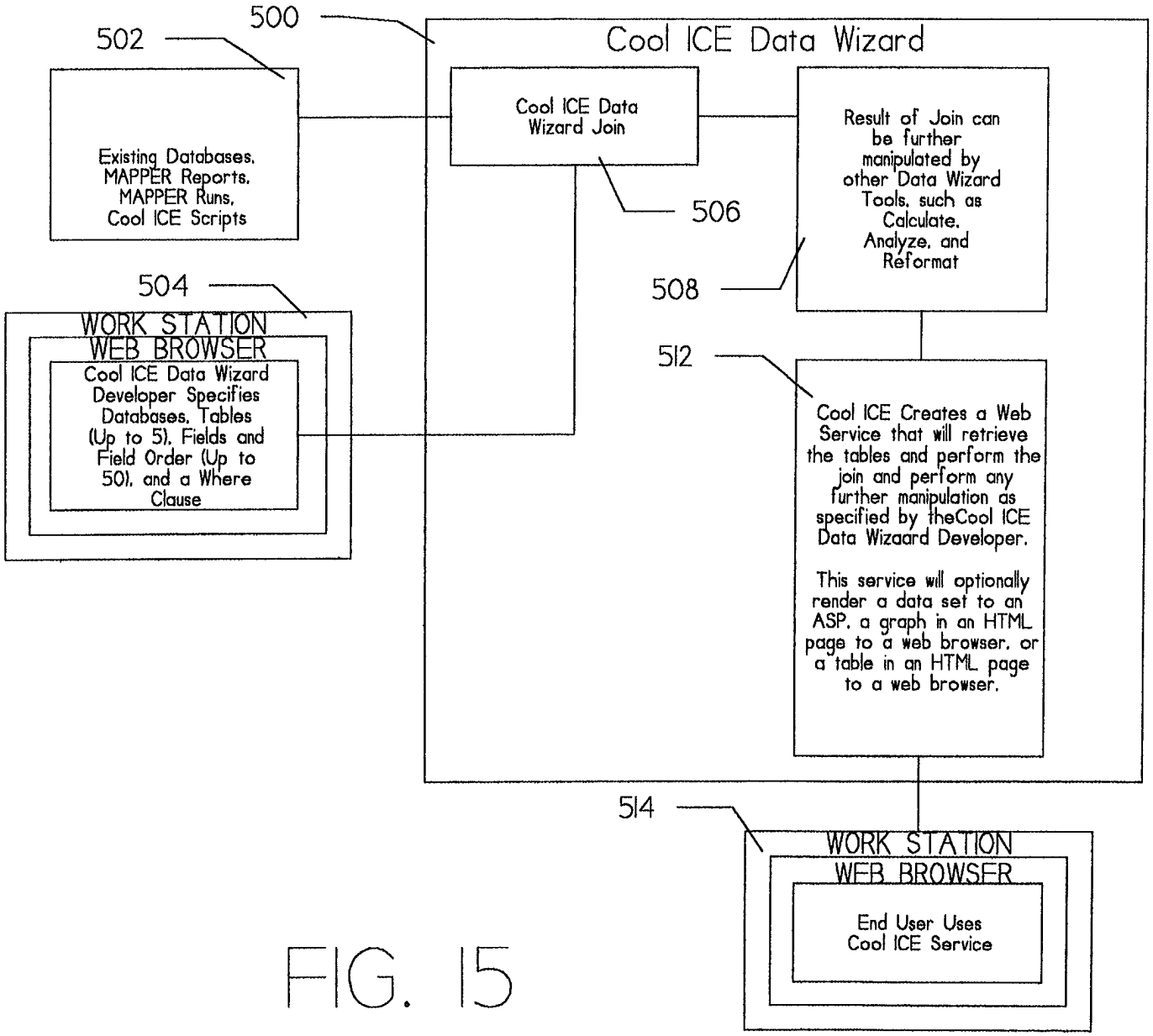
500
Cool ICE Data Wizard
502
Existing Databases, MAPPER Reports, MAPPER Runs, Cool ICE Scripts
Cool ICE Data Wizard Join
506
Result of Join can be further manipulated by other Data Wizard Tools, such as Calculate, Analyze, and Reformat
508
504
WORK STATION WEB BROWSER
Cool ICE Data Wizard Developer Specifies Databases, Tables (Up to 5), Fields and Field Order (Up to 50), and a Where Clause
512
Cool ICE Creates a Web Service that will retrieve the tables and perform the join and perform any further manipulation as specified by theCool ICE Data Wizaard Developer.
This service will optionally render a data set to an ASP, a graph in an HTML page to a web browser, or a table in an HTML page to a web browser.
514
WORK STATION WEB BROWSER
End User Uses Cool ICE Service

FIG. 15

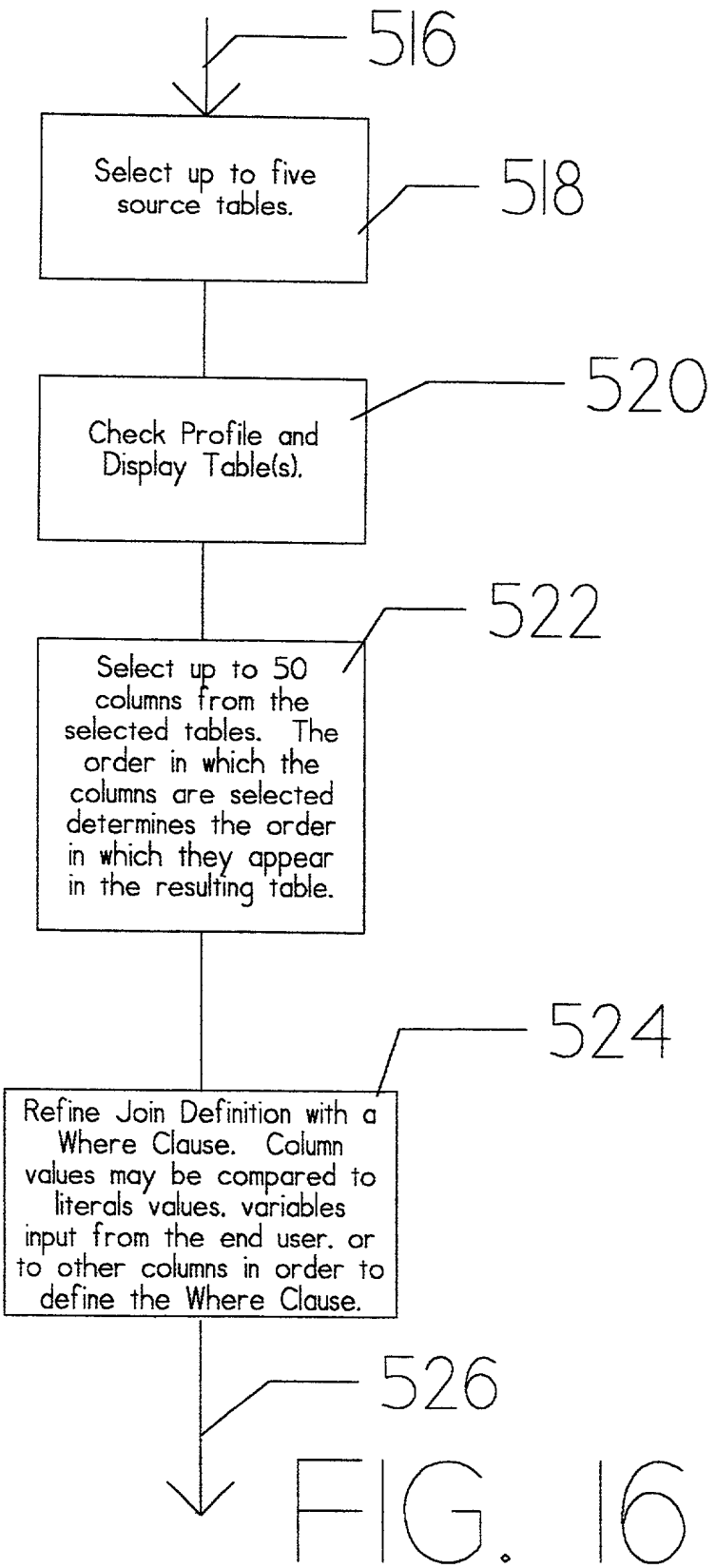
516
Select up to five source tables.
518
Check Profile and Display Table(s).
520
Select up to 50 columns from the selected tables. The order in which the columns are selected determines the order in which they appear in the resulting table.
522
Refine Join Definition with a Where Clause. Column values may be compared to literals values, variables input from the end user, or to other columns in order to define the Where Clause.
524
526

FIG. 16

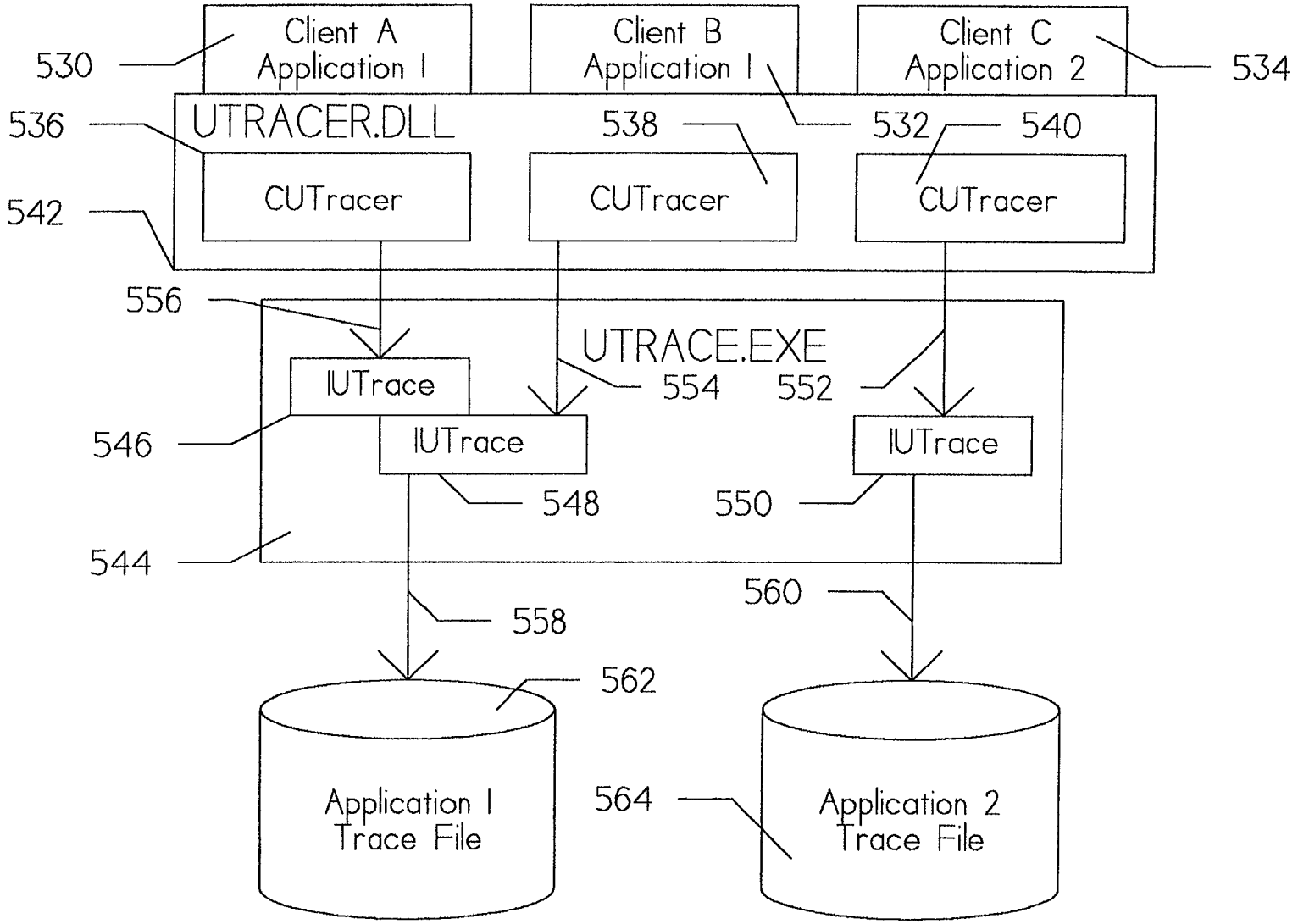
Client A
Application 1
Client B
Application 1
Client C
Application 2
530
534
536
UTRACER.DLL
538
532
540
CUTracer
CUTracer
CUTracer
542
556
UTRACE.EXE
IUTrace
554
552
546
IUTrace
IUTrace
548
550
544
558
560
562
Application 1
Trace File
564
Application 2
Trace File

FIG. 17

HKLM\SOFTWARE\UNISYS\UTRACE

APPNAME -- Subkey matching the name of the application 565

- ENABLETRACE -- DWORD value indication a Boolean (1=trace.. 0=no trace).
- MAXENTRIES -- DWORD value indicating the maximum number of entries in the trace file. If missing. then no upper limit is imposed.
- FORMATFLAGS -- DWORD value indicating message formatting flags.
- POLICYFLAGS -- DWORD value indicating trace policy flags set for the application.
- TRACELEVEL -- DWORD value indicating a trace level. 0 = no trace.
- TRACEPATH -- String value indicating the directory path for the trace files.
- REGTRACE -- A string value containing the HKLM\Software sub key to trace for this application. Blank or missing for no registry trace.
- COMPONENT -- A subkey for a specific component of the application.
  - POLICYFLAGS -- Value indicating component level trace policy flags
  - TRACELEVEL -- DWORD Value indicating a trace level. 0 = no trace.
  - VERSIONTRACE-- String value specifying executable component name for version information tracing.

FIG. 18

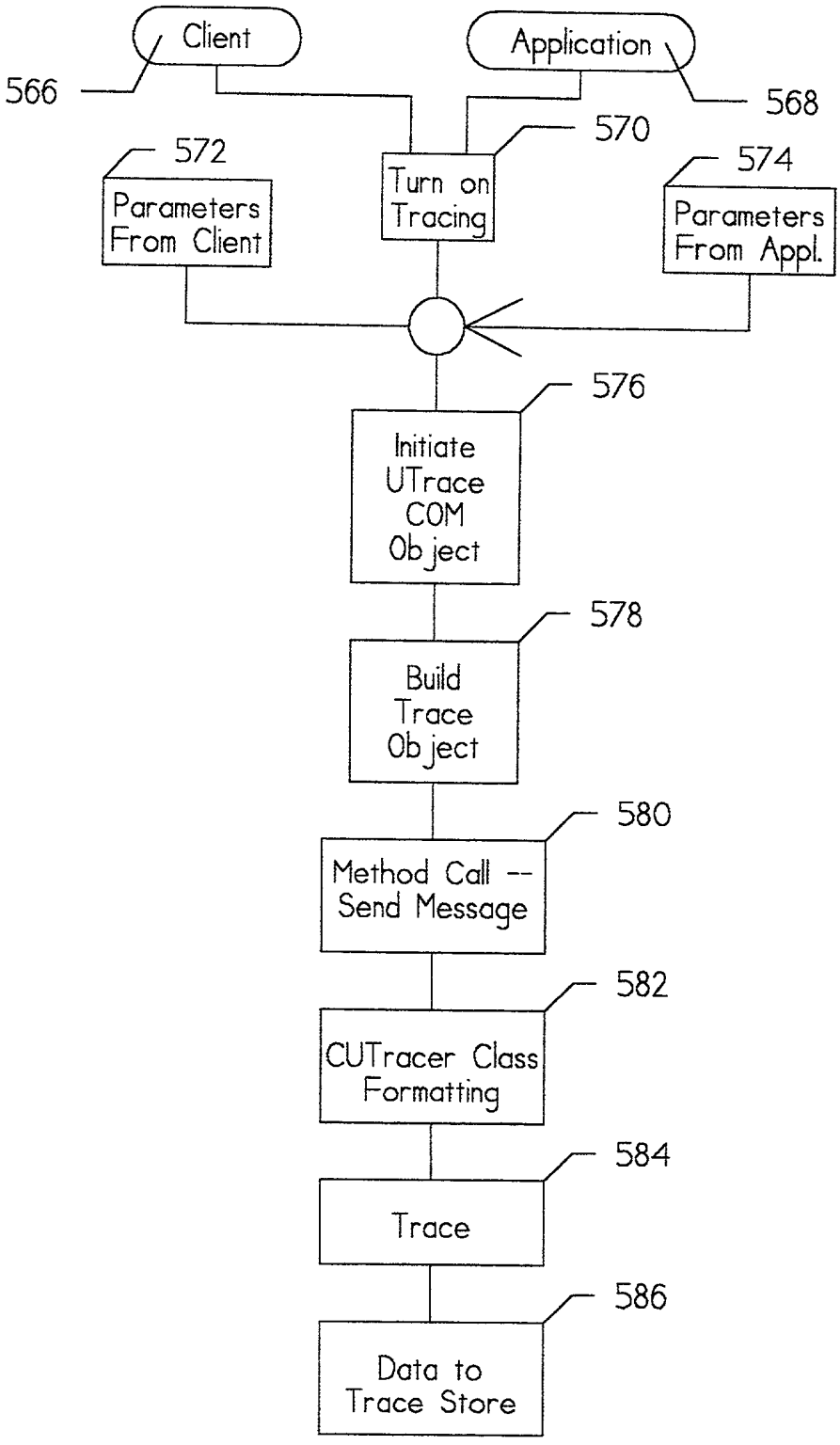
Client
Application
566
568
572
570
574
Parameters From Client
Turn on Tracing
Parameters From Appl.
576
Initiate UTrace COM Object
578
Build Trace Object
580
Method Call -- Send Message
582
CUTracer Class Formatting
584
Trace
586
Data to Trace Store

FIG. 19

```
#define CI_TRACE_VERSION        0xl
#define CI_TRACE_ERROR          0x2
#define CI_TRACE_INTERFACE      0x4
#define CI_TRACE_FLOW           0x8
#define CI_TRACE_DETAIL         0xl0
```

FIG. 20A

```
if (m_trace. Active(C)_TRACE_DETAIL))
m_trace<<"MY Detailed Trace information"<<Localvariable<<traceit
```

FIG. 20B

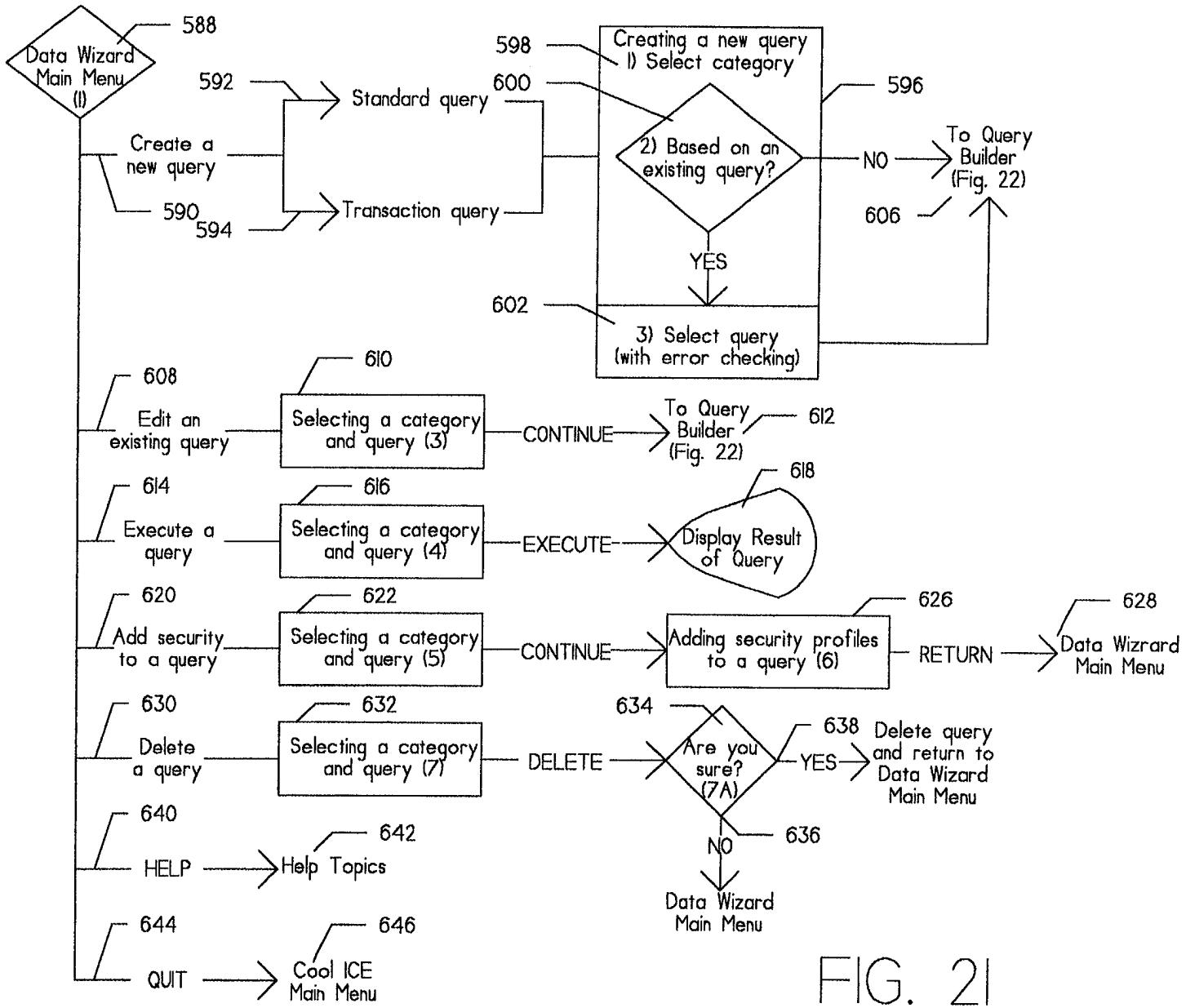

FIG. 21

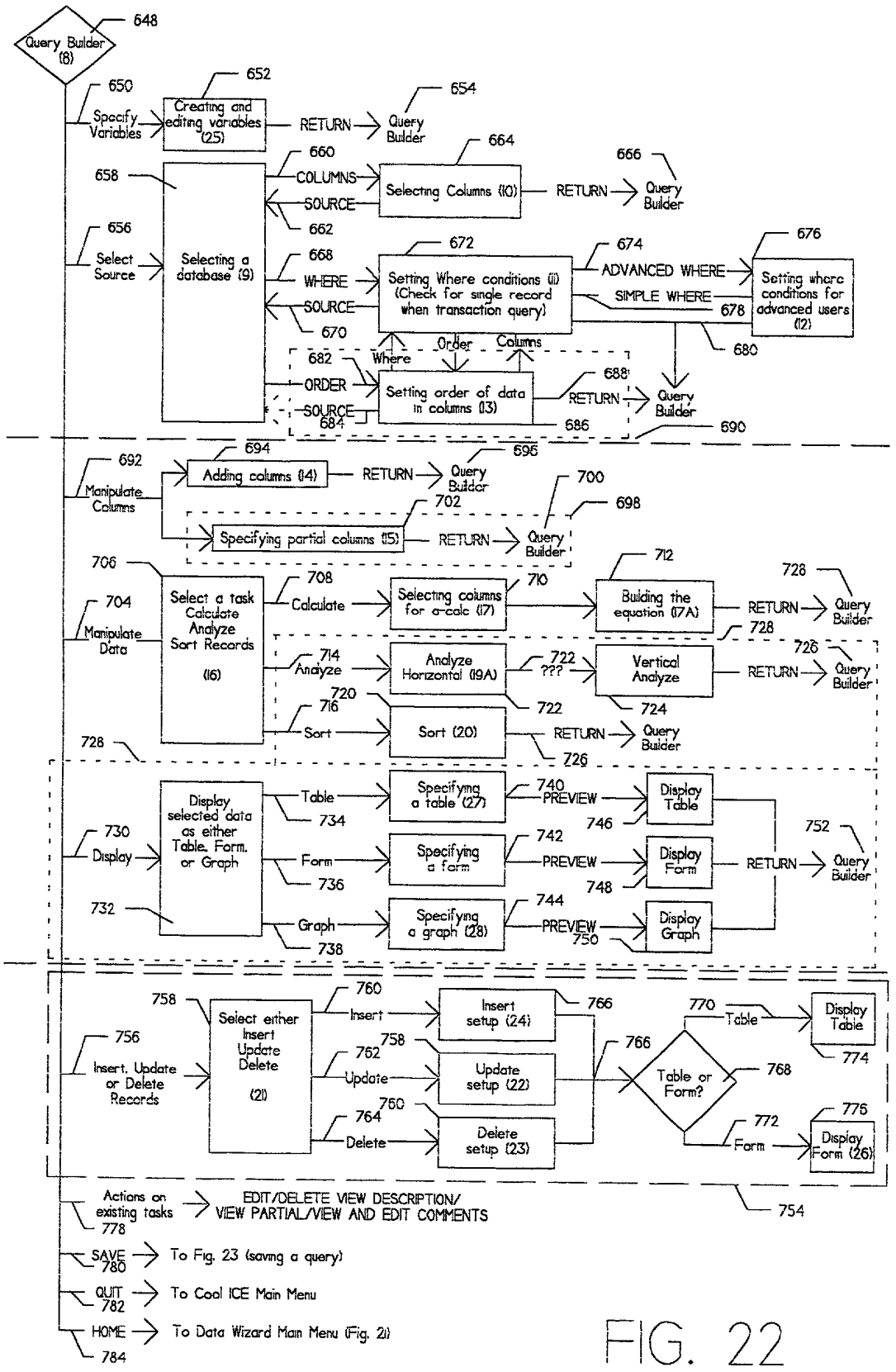
Query Builder (8)
648
Specify Variables
650
Creating and editing variables (25)
652
RETURN
Query Builder
654
Select Source
656
Selecting a database (9)
658
COLUMNS
660
SOURCE
662
Selecting Columns (10)
664
RETURN
Query Builder
666
WHERE
668
SOURCE
670
Setting Where conditions (11) (Check for single record when transaction query)
672
ADVANCED WHERE
674
SIMPLE WHERE
678
Setting where conditions for advanced users (12)
676
680
Order
Columns
Where
ORDER
682
SOURCE
684
Setting order of data in columns (13)
686
RETURN
688
Query Builder
690
Manipulate Columns
692
Adding columns (14)
694
RETURN
Query Builder
696
Specifying partial columns (15)
702
RETURN
Query Builder
698
700
Manipulate Data
704
Select a task Calculate Analyze Sort Records (16)
706
Calculate
708
Selecting columns for a-calc (17)
710
Building the equation (17A)
712
RETURN
Query Builder
728
Analyze
714
Analyze Horizontal (19A)
722
???
Vertical Analyze
724
RETURN
Query Builder
726
728
Sort
716
Sort (20)
720
RETURN
Query Builder
726
728
Display
730
Display selected data as either Table, Form, or Graph
732
Table
734
Specifying a table (27)
740
PREVIEW
Display Table
746
Form
736
Specifying a form
742
PREVIEW
Display Form
748
RETURN
Query Builder
752
Graph
738
Specifying a graph (28)
744
PREVIEW
750
Display Graph
Insert, Update or Delete Records
756
Select either Insert Update Delete (21)
758
Insert
760
Insert setup (24)
766
Update
762
Update setup (22)
766
Delete
764
Delete setup (23)
766
Table or Form?
768
Table
770
Display Table
774
Form
772
Display Form (26)
776
754
Actions on existing tasks
778
EDIT/DELETE VIEW DESCRIPTION/ VIEW PARTIAL/VIEW AND EDIT COMMENTS
SAVE
780
To Fig. 23 (saving a query)
QUIT
782
To Cool ICE Main Menu
HOME
784
To Data Wizard Main Menu (Fig. 2)

FIG. 22

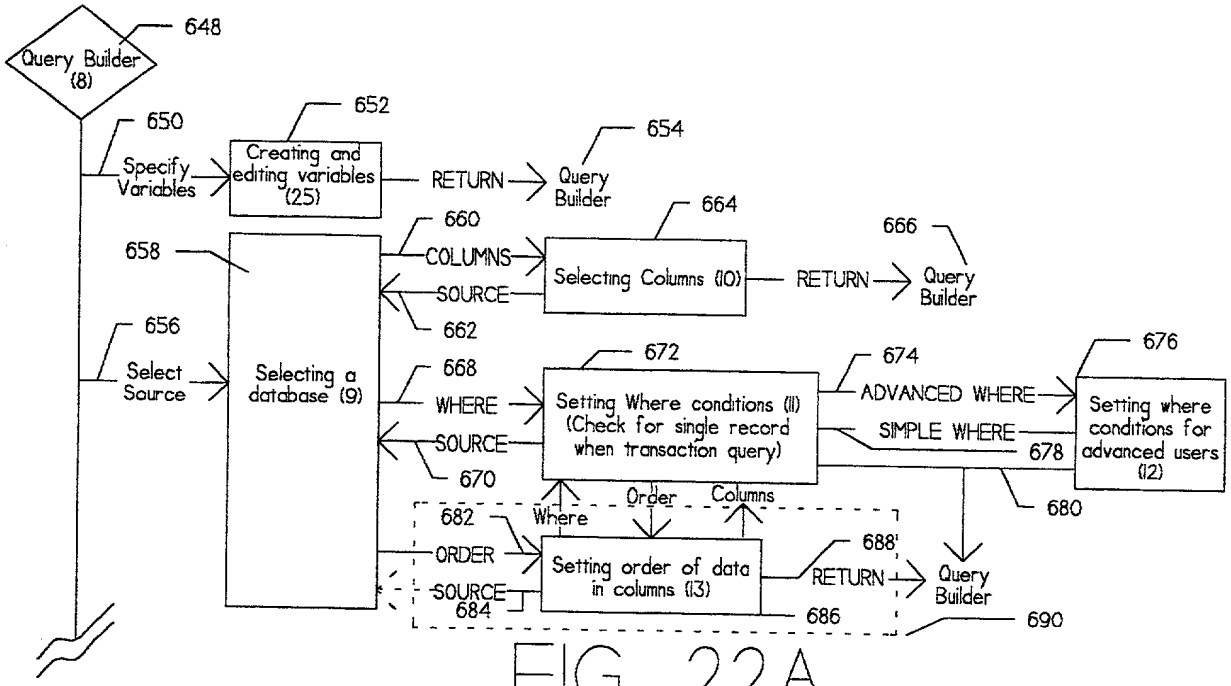
Query Builder (8)
648
650
Specify Variables
652
Creating and editing variables (25)
RETURN
654
Query Builder
658
656
Select Source
Selecting a database (9)
660
COLUMNS
SOURCE
662
664
Selecting Columns (10)
RETURN
666
Query Builder
668
WHERE
SOURCE
670
672
Setting Where conditions (11) (Check for single record when transaction query)
674
ADVANCED WHERE
SIMPLE WHERE
678
676
Setting where conditions for advanced users (12)
680
Order
Columns
Where
682
ORDER
SOURCE
684
Setting order of data in columns (13)
688
RETURN
Query Builder
686
690

FIG. 22A

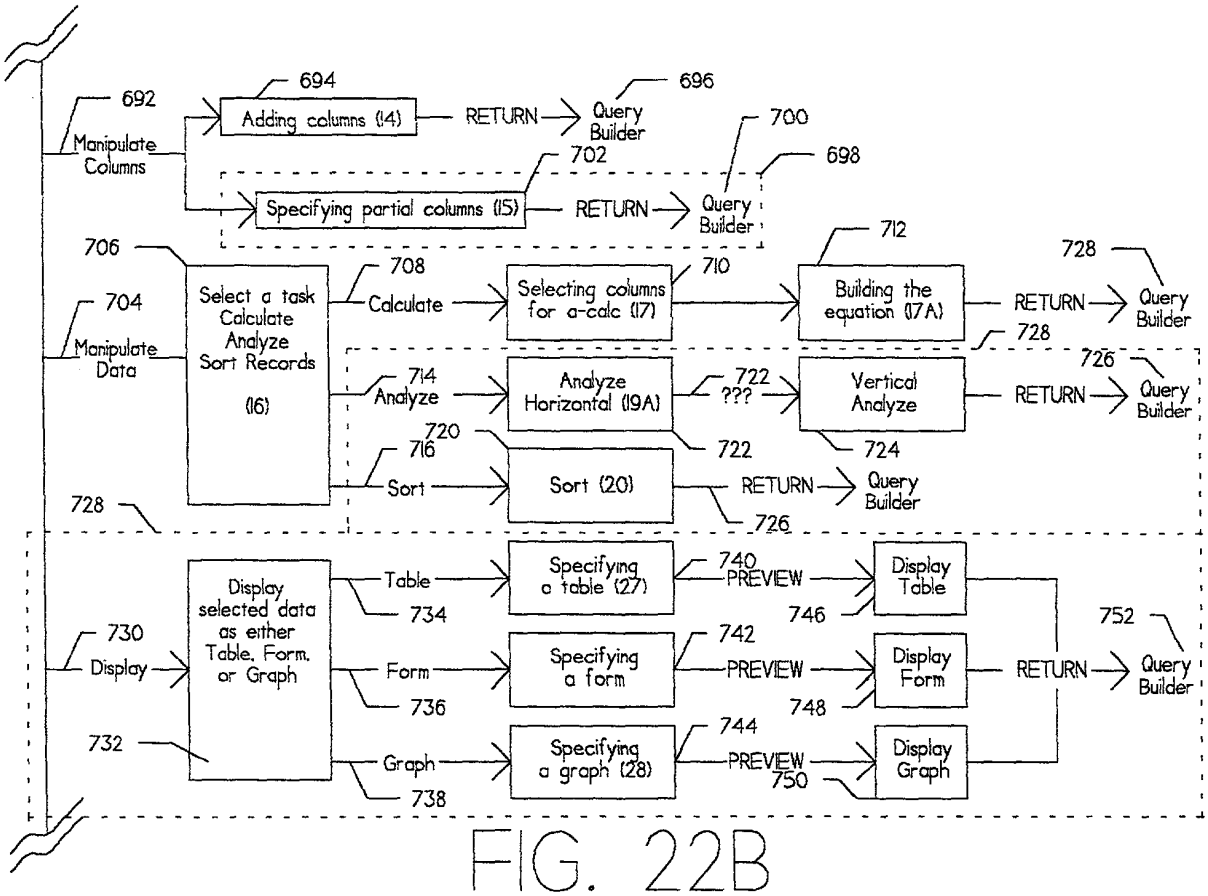
692
Manipulate Columns
694
Adding columns (14)
RETURN
696
Query Builder
700
698
702
Specifying partial columns (15)
RETURN
Query Builder
706
704
Manipulate Data
Select a task
Calculate
Analyze
Sort Records
(16)
708
Calculate
Selecting columns for a-calc (17)
710
712
Building the equation (17A)
RETURN
728
Query Builder
728
714
Analyze
Analyze Horizontal (19A)
722
???
Vertical Analyze
RETURN
726
Query Builder
720
716
Sort
Sort (20)
722
724
RETURN
Query Builder
726
728
730
Display
Display selected data as either Table, Form, or Graph
732
Table
734
Specifying a table (27)
740
PREVIEW
Display Table
746
Form
736
Specifying a form
742
PREVIEW
Display Form
748
RETURN
752
Query Builder
Graph
738
Specifying a graph (28)
744
PREVIEW
750
Display Graph

FIG. 22B

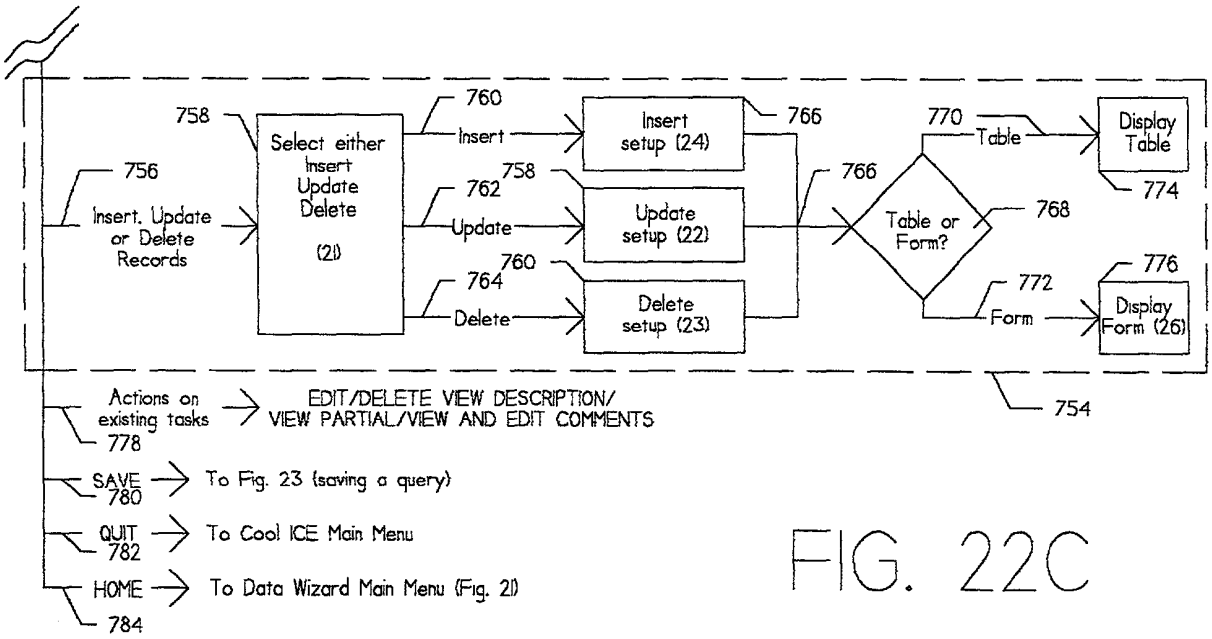
758
Select either
Insert
Update
Delete
(21)
760
Insert
Insert
setup (24)
766
770
Table
Display
Table
774
756
Insert, Update
or Delete
Records
758
762
Update
Update
setup (22)
766
Table or
Form?
768
760
764
Delete
Delete
setup (23)
772
Form
776
Display
Form (26)
754
Actions on
existing tasks
778
EDIT/DELETE VIEW DESCRIPTION/
VIEW PARTIAL/VIEW AND EDIT COMMENTS
SAVE
780
To Fig. 23 (saving a query)
QUIT
782
To Cool ICE Main Menu
HOME
784
To Data Wizard Main Menu (Fig. 21)

FIG. 22C

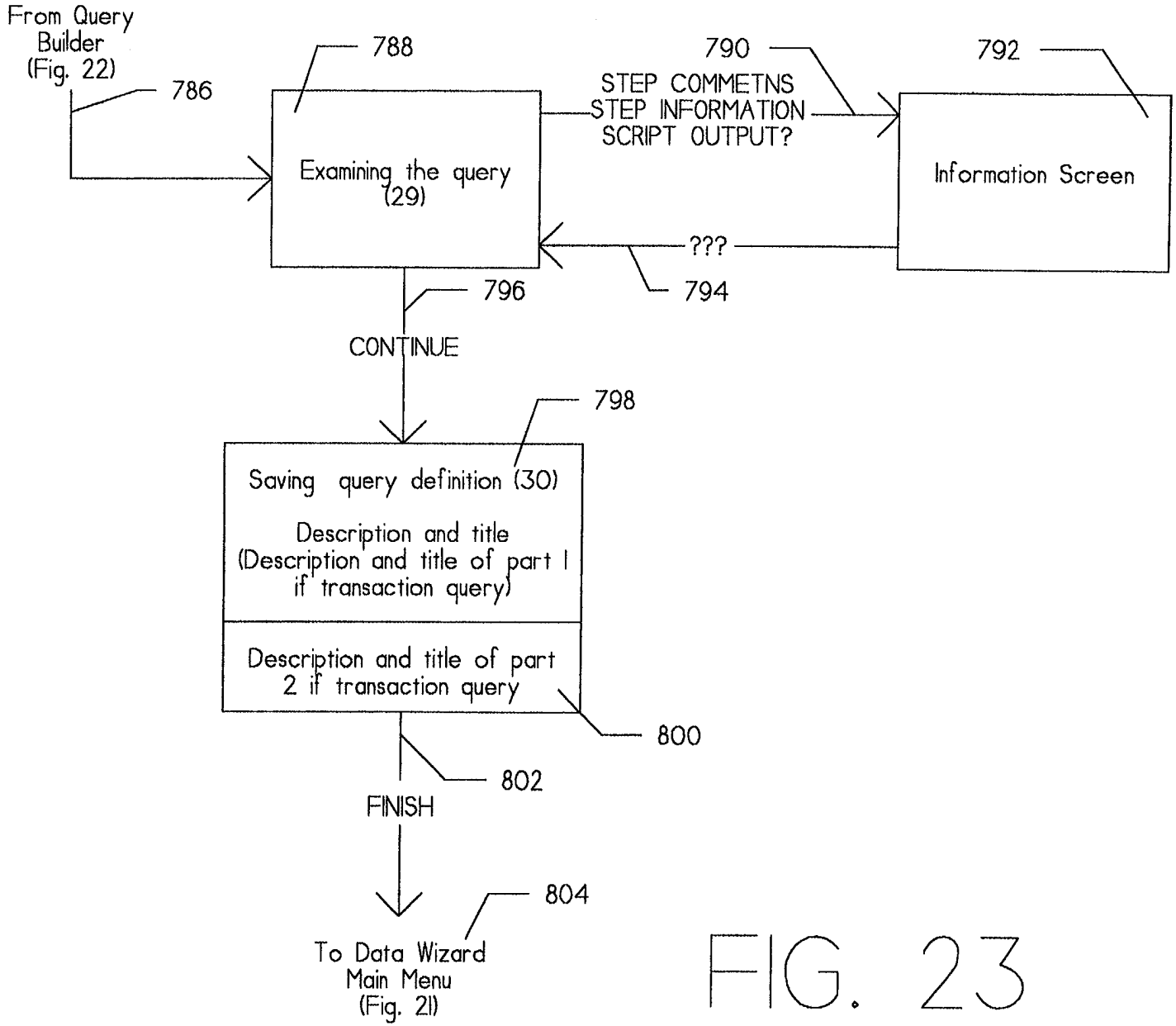

FIG. 23

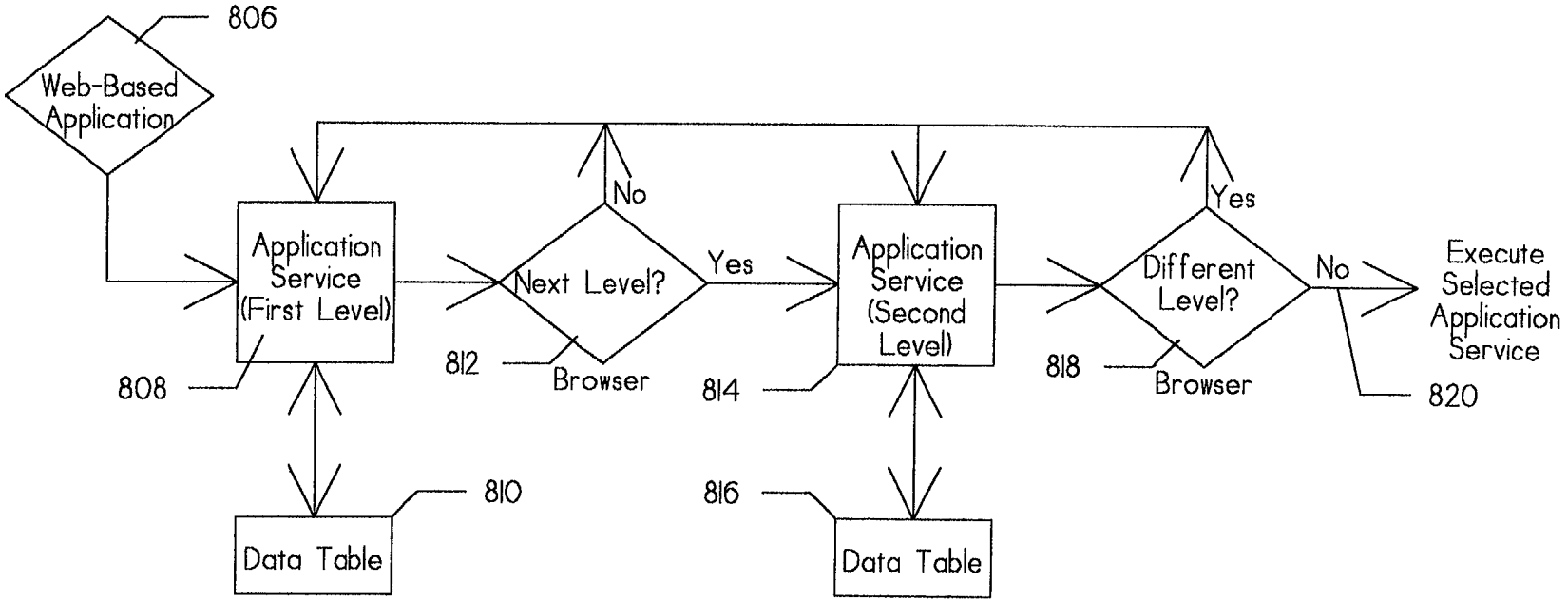
806
Web-Based Application
Application Service (First Level)
808
Next Level?
No
Yes
812
Browser
Application Service (Second Level)
814
Different Level?
Yes
No
818
Browser
Execute Selected Application Service
820
Data Table
810
Data Table
816

FIG. 24

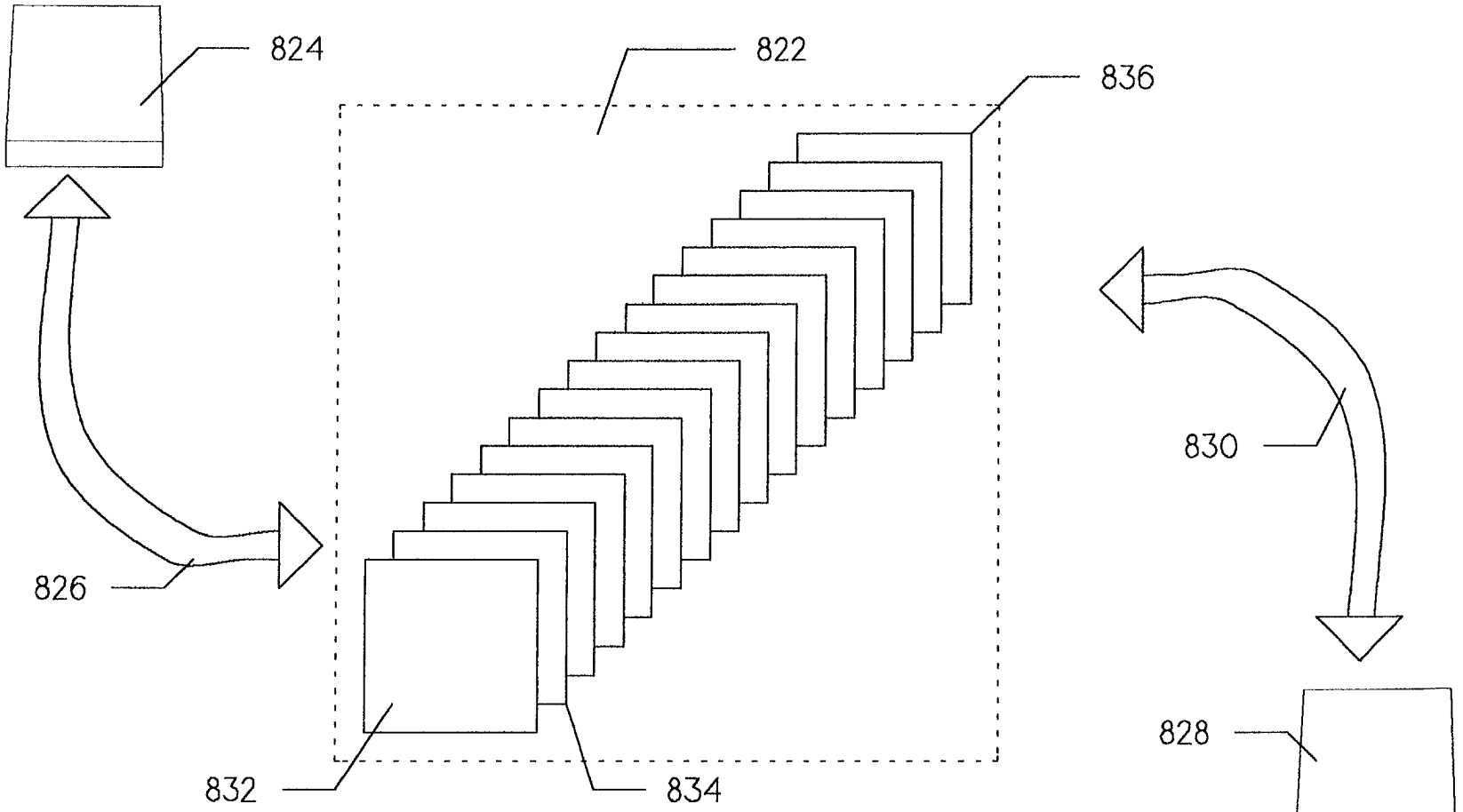

FIG. 25

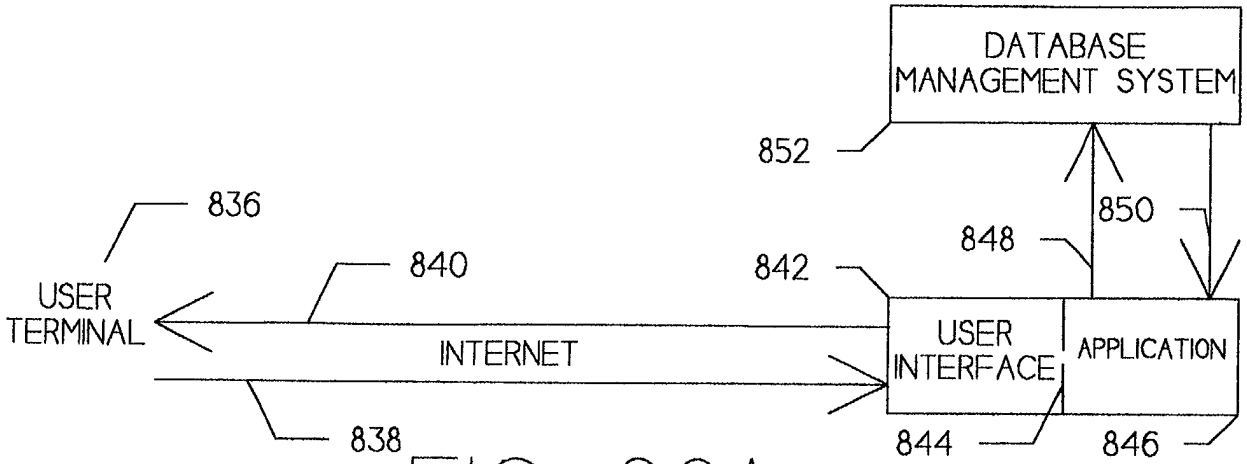

FIG. 26A

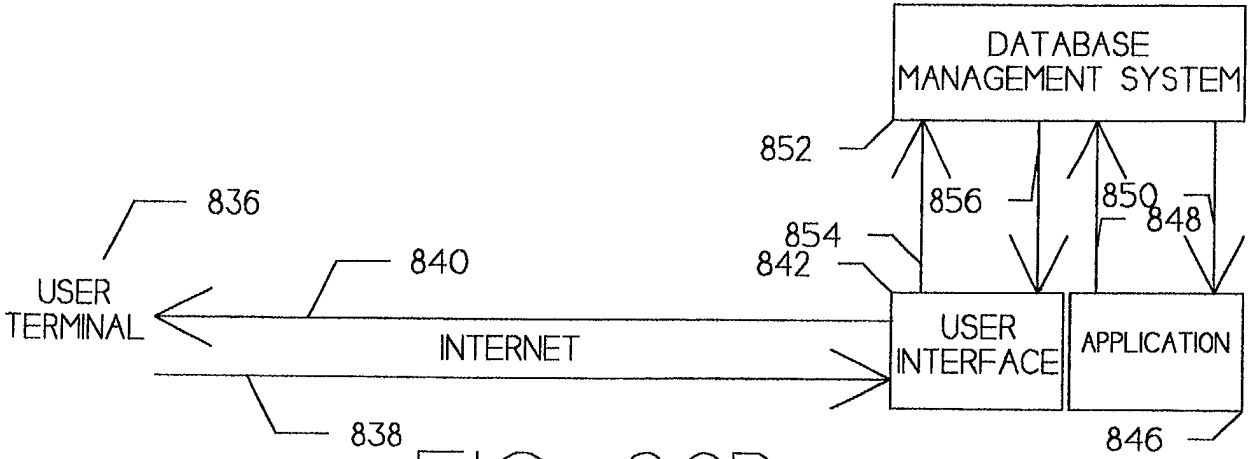

FIG. 26B